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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/670,258	09/26/2003	Fumitaka Nakayama	501.43140X00	4899
20457	7590	04/19/2005	EXAMINER	
ANTONELLI, TERRY, STOUT & KRAUS, LLP 1300 NORTH SEVENTEENTH STREET SUITE 1800 ARLINGTON, VA 22209-3873			SMITH, BRADLEY	
			ART UNIT	PAPER NUMBER
			2891	

DATE MAILED: 04/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/670,258	Applicant(s) NAKAYAMA ET AL.	
	Examiner Bradley K. Smith	Art Unit 2891	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-43 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 28-43 is/are allowed.
- 6) ☒ Claim(s) 21-27 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>9/26/03</u> . | 6) <input checked="" type="checkbox"/> Other: <u>search notes</u> . |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.
3. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claim 21 is rejected under 35 U.S.C. 102(b) as being anticipated by Ewen et al. (US Patent 5,446,311). Ewen et al. disclose an inductor is formed to the uppermost wiring layer among the plural wiring layers (see figure 3).

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6. Claims 21, 22, 23-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Ma et al. (US Patent 5,939,753). Ma et al. disclose a device with plural wiring layers and the inductor is on the uppermost wiring layer (see figure 9). With regards to claim 22, Ma et al. disclose metallization/silicide (bonding) pad is formed to surface of the semiconductor layer (92/95) and to the upper wiring layer (159). With regards to claim 24, Ma et al. disclose a capacitor element having an upper and lower electrode and an upper electrode is above the semiconductor substrate and the inductor element is above the upper electrode of the capacitor element (see figure 9). With regards to claim 25, Ma et al. disclose forming the top capacitor electrode and the wiring layer out of a metal film. With regard to claims 26, it is inherent that the circuitry could function at a frequency greater than 800 MHz and that the inductor could form an interstage matching circuit (the applicant has not claimed a structure difference over the prior therefore the prior art could inherently perform the same function). With regards to claim 27, Mu et al disclose the inductor having upper and lower terminals (see figure 9).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ma et al. (US Patent 5,939,753). Ma et al. disclose a device with plural wiring layers and the

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inductor is on the uppermost wiring layer (see figure 9). However Ma et al fails to disclose the top wiring layer being thicker than the lower wiring layer. It would have been an obvious matter of design choice to increase the thickness of the layer, since such a modification would have involved a mere change in the size (thickness) of a component. A change in size is generally recognized as being within the level of ordinary skill in the art. In re Rose, 105 USPQ 237 (CCPA 1955). Furthermore the increase in thickness would reduce the resistance in the upper wiring layer.

Allowable Subject Matter

9. Claims 28-43 are allowed.

10. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to teach or suggest the wherein a first circuit operating in a first frequency band and a second circuit operating in a second frequency band are formed over the semiconductor substrate, wherein the first capacitor element is included in the first circuit and the second capacitor element is included in the second circuit, and wherein the frequency included in the first frequency band is lower than the frequency included in the second frequency band (claims 28-41), a second MISFET having gate and drain disposed to the main surface of the semiconductor substrate and a source disposed to the rear face of the semiconductor substrate; a passive element formed over the main surface of the semiconductor substrate and having two terminals', and a conductive film formed to the rear face of the semiconductor substrate, wherein the conductive film is connected with a fixed potential, and one of the terminals of the

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passive element, the well, and the source of the second MISFET are electrically connected with the connective film (claim 42), and wherein the first circuit block and the second circuit block include one of a circuit amplifying high frequency power or a circuit controlling the circuit block amplifying high frequency power, each of the first circuit block and the second circuit block has an impurity layer formed by introduction of impurities, and the first circuit block and the second circuit block are electrically connected by way of the impurity layer with the conductive film (claim 43).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bradley K. Smith whose telephone number is (571) 272-1884. The examiner can normally be reached on 10-6 Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bill Baumeister can be reached on (571) 272-1722. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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A handwritten signature in black ink, appearing to read 'Brad Smith', with a stylized, cursive script.

Brad Smith
Primary Examiner
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